

(12) UK Patent Application (19) GB (11) 2 195 129 (13) A

(43) Application published 30 Mar 1988

(21) Application No 8615973

(22) Date of filing 1 Jul 1986

(30) Priority data

(31) 8604031

(32) 19 Feb 1986

(33) GB

(51) INT CL⁴

D06C 3/08 B41F 15/36

(52) Domestic classification (Edition J):

D1S 18E

B6C 621 628 656 MB

B6P B13

(71) Applicants

Matthew Alexander,
2 Oxford Street, Margate, Kent CT9 1TD.

Bryan Davies,
75 Westbrook Avenue, Margate, Kent

(72) Inventors

Matthew Alexander
Bryan Davies

(74) Agent and/or Address for Service

M Alexander,
2 Oxford Street, Margate, Kent CT9 1TD.

(56) Documents cited

GB 1267070

GB 0357653

(58) Field of search

D1S

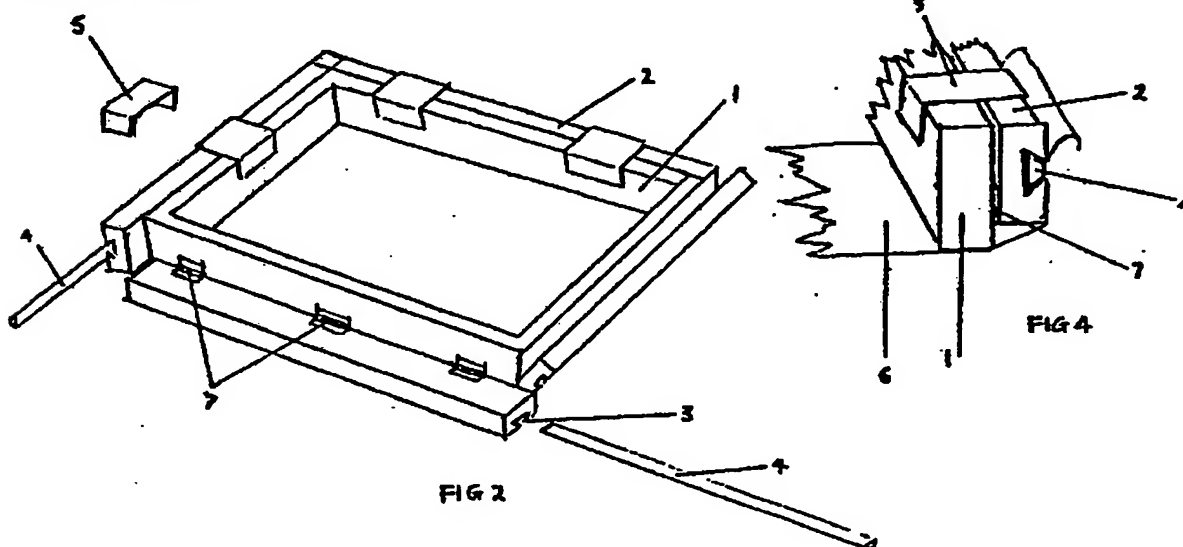
B6C

B6P

Selected US specifications from IPC sub-classes D06C
B41F

(54) Screen stretching and securing frame

(57) A screen stretching and securing frame, has an inner rigid printing frame 1 with hinged bars 2 which are releasably secured by clips 5 and can be opened or closed about the hinge which acts as a fulcrum. The screen fabric 6 is secured into the groove in the hinged bar using the sliding rods 4. Stretching and securing of the screen fabric is achieved by closing the hinged bars whereby the screen is tightened and this tightening has at the same time the effect of pulling the sliding rods to the front of the groove thus gripping the screen fabric.



GB 2 195 129 A

13 JUL 86 15973

15

2195129

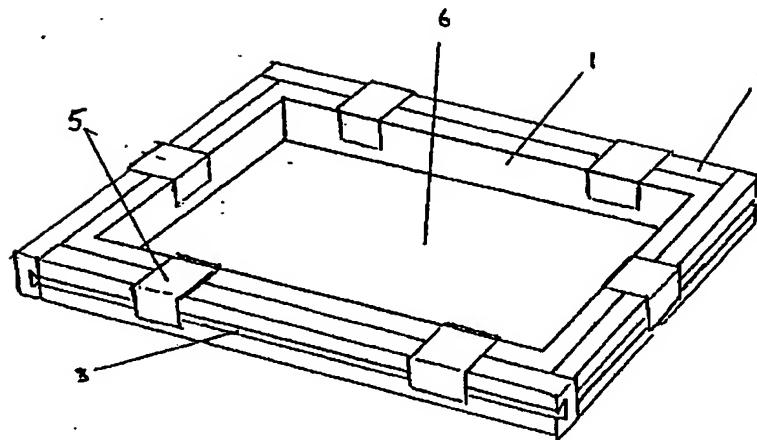


FIG 1

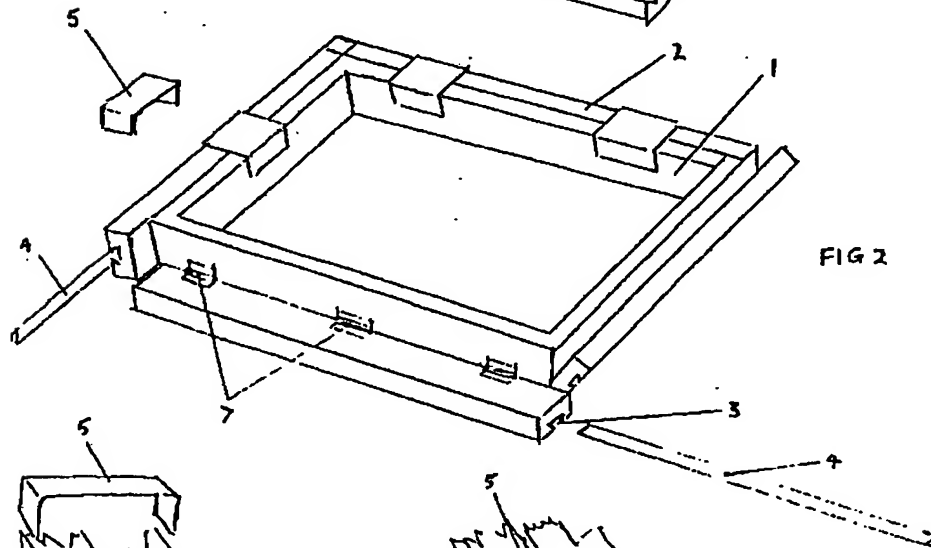


FIG 2

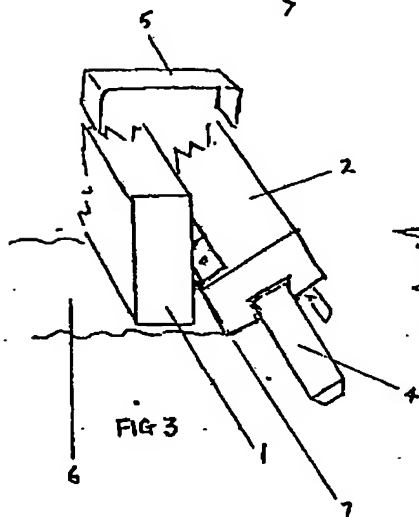


FIG 3

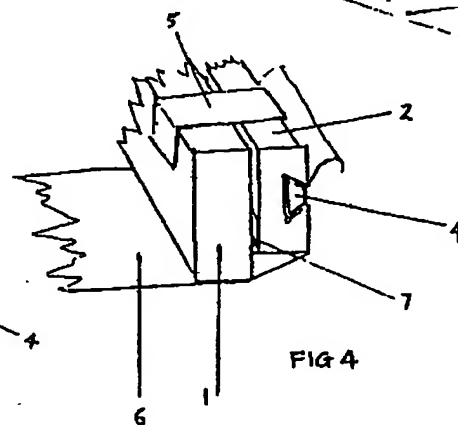


FIG 4

SPECIFICATION

Screen stretching and securing frame

- 5 This invention relates to a screen stretching and securing frame.

The conventional method of hand-stretching and securing mesh to a frame for the purpose of silk-screen has always been an extremely time consuming method. The method involves tensioning the fabric bit by bit and securing it with staples, driven into the frame, thus slowly damaging the frame. The fabric is generally unevenly stretched and the strands of the screen mesh can easily be pulled out of alignment. The screen mesh once damaged has to be removed and then the frame requires cleaning and all the staples have to be removed before the lengthy process of re-stretching can begin again.

Screen mesh stretching devices available commercially are generally expensive and more complicated to use. Moreover they fulfil only the task of stretching and cannot function as a printing frame as well.

According to the present invention there is provided a hinged stretching frame comprising an inner printing frame, outer hinged slotted bars which have sliding rods which fit into the slots and hinges which attach the bars to the printing frame. There are also provided clips which allow the movable hinged bar to be secured to the inner frame.

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 shows in perspective, the frame with the hinged bars closed and secured as they are when the fabric is under tension.

Figure 2 shows the frame with two of the bars lowered as they would be before the final tensioning. It also shows the sliding rods partially and fully removed.

Figure 3 illustrates a cross section of the device when bar is lowered.

Figure 4 illustrates a cross section of the frame when the hinged bar is closed and secured by clip.

Referring to the drawing, the frame comprises an inner printing frame 1 and outer bars 2 hinged 7 to the inner frame. The hinged bars are shown closed and secured by clips 5 in Fig. 1.

In order to attach the fabric to the frame the clips are first removed and the hinged bars are dropped, pivoting on the hinges. The sliding rods are removed and the fabric is offered up and pushed into the slot 3 and the sliding rod 4 is pushed into the slot over the fabric as illustrated in Fig. 3. This is repeated for all four sides of the frame.

Two adjacent sides of the frame are secured with the clips, partially tensioning the fabric 6. The other two hinged bars are then

closed and secured with clips bringing the fabric up to tension as in Fig. 4.

To remove the fabric from the frame the steps referred to above are carried out in the reverse sequence.

CLAIMS

1. A screen stretching and securing frame comprising an inner rigid frame, outer grooved, hinged bars, which tension screen when closed, means for releasably securing the hinged bars to the inner frame, slides which fit into the grooves in the hinged bars to grip the screen mesh.
2. A screen stretching and securing frame as claimed in Claim 1, wherein the grooves in the outer frame are arranged so that the slides may only enter or exit the groove from the end of the groove.
3. A screen stretching and securing frame as claimed in Claim 1, or claim 2, wherein catchment means is provided to secure the hinged bars to the inner rigid frame. These catchment means may or may not be attached to the frame.
4. A screen stretching and securing frame as claimed in Claims 1, 2 or 3, wherein the outer grooved bars are attached to the inner rigid frame by at least one hinge each.
5. A screen stretching and securing frame substantially described herein with reference to Figs. 1-4 of the accompanying drawings.

Published 1988 at The Patent Office, State House, 56/71 High Holborn, London WC1R 4TP. Further copies may be obtained from The Patent Office, Sales Branch, 61 Mary Cray, Orpington, Kent BR5 3RD. Printed by Burgess & Son (Abingdon) Ltd. Con. 1/87.